

REMARKS

Amendments

Amendments to the Claims

Applicant has amended the claims to more particularly point out what Applicant regards as the invention. In addition, claims 2, 11, 16 and 22 are amended as independent claims. No new matter has been added as a result of these amendments.

Rejections

Rejections under 35 U.S.C. § 102(b)

Claims 1, 2 and 9

Claims 1, 2 and 9 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Rao, WO 97/06523. Applicant respectfully submits that Rao does not teach each and every element of the invention as claimed in claims 1, 2 and 9.

Rao discloses a unified system and display frame buffer memory system where the display frame buffer and system memory are collocated in a single integrated circuit or bank of circuits. The memory controller is connected to the display controller, which in turn controls the display. Furthermore, Rao's display frame buffer is segmented into two blocks, one block for screen refresh and one for display data update. Rao contrasts the unified system with the prior art in which the frame buffer is separate and apart from the system memory and the frame buffer must interface with the system through a display controller. The prior art in Rao has two memory controllers: one for the main system memory and one for the frame buffer.

With regards to claim 1, Applicant claims a graphics subsystem including a 2D graphics engine. Rao does not teach or suggest a graphics subsystem including a 2D graphics engine, in which the graphics subsystem is coupled to the frame preparation memory to provide updated images to the frame refresh memory.

With regards to claim 2, Applicant claims a sole memory controller that maps an address for the refresh memory onto a physical memory device separate from the main

memory. The Examiner states “Rao discloses prior art where the frame buffer (comprising the “refresh memory”) is separate and apart from the system memory”. However, the prior art of Rao is for a separate memory system with two memory controllers, not a system with a sole memory controller as claimed by Applicant. Furthermore, Rao does not teach or disclose mapping part of the color buffer onto a physical memory device separate from the main memory. Thus, Rao does not teach or suggest the claimed element of a unified memory architecture that maps an address for the refresh memory onto a physical memory device separate from the main memory.

Accordingly, Rao cannot be properly interpreted as disclosing the claimed element in claims 1 and 2 and claim 9 that depends on claim 1. Therefore, Applicant respectfully submits that the invention as claimed in claims 1, 2 and 9 is not anticipated by Rao under 35 U.S.C. § 102(e) and respectfully requests the withdrawal of the rejection of the claims.

Rejections under 35 U.S.C. § 103(a)

Claims 3-8 and 10-26

Claims 3-8 and 10-26 stand rejected under 35 U.S.C. § 103(a) as being obvious over Rao in view of Akeley, US Patent No. 6,075,543. Applicant respectfully submits that the combination does not teach each and every element of the invention as claimed in claims 3-8 and 10-26.

Akeley discloses managing multiple frame buffers by maintaining a queue of buffers. The newest frame buffer appended to the queue is the front buffer. The oldest frame buffer is the back buffer. Any intermediate buffers is also considered a back buffer. Akeley does not disclose the type of graphics subsystem used to manage the buffers or how the buffers are mapped onto physical or graphics memories.

Applicant respectfully submits that the combination of Rao and Akeley does not support a *prima facie* case of obviousness because the combination does not teach or suggest each and every limitation of Applicant’s invention as claimed in claims 3-8 and 10-26. Claims 3-8 depend from independent claim 1. Furthermore, like claim 1, claims 10, 15 and 22 claim a graphics subsystem including a 2D graphics engine. Thus, Akeley must disclose at the least the missing element from claims 1, 10, 15, and 22 in order to have a proper *prima facie* case for claims 3-8, 10, 12-14, 15, 17-21, 22 and 24-26.

Additionally, like claim 2, claims 11, 16 and 22 claim mapping an address for the refresh memory onto a physical memory device separate from the main memory. Because Rao does teach or suggest this limitation of claims 11, 16 and 22, as per above, Akeley must disclose the missing elements from claims 11, 16 and 22 in order to have a *prima facie* case for claims 11, 16 and 22.

However, there is no disclosure in Akeley that teaches or suggests a graphics subsystem including a 2D graphics engine. Furthermore, Akeley does not teach or suggest mapping an address for the refresh memory onto a physical memory device separate from the main memory. In contrast, Akeley discloses managing multiple buffers. There is no disclosure in Akeley that teaches or suggests suggests a graphics subsystem including a 2D graphics engine or how the buffers are mapped onto physical or graphics memories.

As neither Rao nor Akeley teach or suggest this element as claimed in claims 1-2, 10-11, 15-16 and 22-23, the combination cannot be interpreted as disclosing claims 1-2, 10-11, 15-16 and 22-23 and claims 3-8, 12-14, 17-21 and 24-26 that depend on them, respectively. Therefore, the combination cannot render obvious Applicant's invention as claimed in claims 3-8 and 10-26, and Applicant respectfully requests the withdrawal of the rejection of the claims under 35 U.S.C. § 103(a) over the combination.

SUMMARY

Claims 1-26 are currently pending. In view of the foregoing amendments and remarks, Applicant respectfully submits that the pending claims are in condition for allowance. Applicant respectfully requests reconsideration of the application and allowance of the pending claims.

If the Examiner determines the prompt allowance of these claims could be facilitated by a telephone conference, the Examiner is invited to contact Eric Replogle at (408) 720-8300.

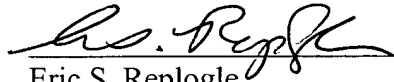
Deposit Account Authorization

Authorization is hereby given to charge our Deposit Account No. 02-2666 for any charges that may be due. Furthermore, if an extension is required, then Applicant hereby requests such extension.

Respectfully submitted,

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